



Lucky Run Stream Restoration



Watershed	Chesapeake Bay, Potomac River, Four Mile Run
Linear Feet of Stream Restored	950
Acres Treated	225
Project Status	\$1.9 million total with \$668,000 from a VDEQ grant
Completion Date (Projected)	Survey and design complete. Construction is anticipated to begin Fall 2019/Winter 2020 and last about eight months.
Percent of Pollution Reduction Requirements Met at Project Completion	9% Total Nitrogen; 26% Total Phosphorus; and 57% Total Suspended Solids

The City of Alexandria operates under Virginia Department of Environmental Quality (VDEQ) General Virginia Pollutant Discharge Elimination System Municipal Separate Storm Sewer System (MS4) Permit, VAR040057. Under the MS4 permit, VDEQ has included a “special condition” to comply with the pollution reduction requirements supporting the region-wide Chesapeake Bay pollution diet – total maximum daily load (TMDL) – for nitrogen, phosphorus, and suspended solids (sediment). The City’s pollution reduction requirements are based on the overall reduction set by the U.S. Environmental Protection Agency for Virginia and the Potomac River Basin.

After a stream assessment of 57 stream reaches within the City’s eight local watersheds, Lucky Run was prioritized for restoration in support of the Chesapeake Bay TMDL based on stream conditions relating to habitat, infrastructure impacts, problem areas, stream characteristics, and geomorphic classification.

Lucky Run watershed consists of approximately 225 acres of densely developed urban land within the Four Mile Run watershed which drains to the Potomac River and is within the Chesapeake Bay watershed. Due to the highly urban nature of the watershed, the stream channel and banks have eroded, and the stream currently exhibits instability along with several unfavorable characteristics like exposed sanitary infrastructure. The



*Photo: Lucky Run, Pre-Restoration, Alexandria, VA
“Horseshoe” icon by Nikita Kozin from the Noun Project.*

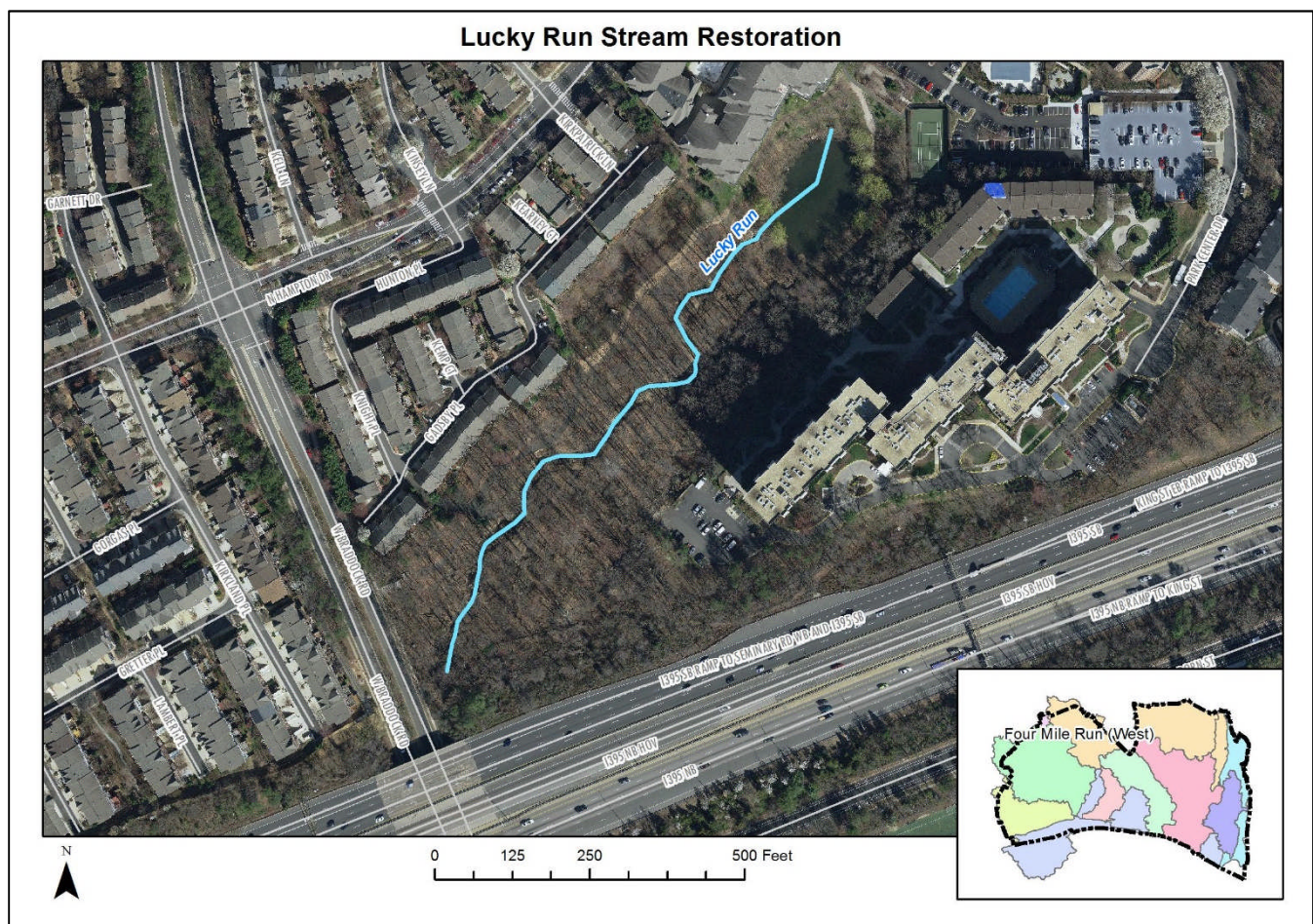
restored stream will be reconnected to the floodplain which will help filter pollutants, including nitrogen, phosphorous, and sediment. In addition, the stream banks will be stabilized using native vegetation and other natural sustainable techniques which will mimic nature and mitigate the bank erosion, preventing large amounts of sediment from washing downstream.

Project Goals and Co-Benefits

- ✓ Restore the stream to a stable condition to improve water quality;
- ✓ Reduce sediment build-up downstream and in pond;
- ✓ Improve the physical, chemical, and biological aspects of the stream;
- ✓ Enhance aesthetics, protect walking trail, and further establish the area as an amenity;
- ✓ Use native plants to provide habitat for riparian birds and animals; and
- ✓ Protect utilities, including the sanitary sewer and storm drain outfalls.

Project Location

The project section of the Lucky Run begins where the stream emerges from the culvert under West Braddock Road near I-395 and continues downstream to the wet pond near Ford Avenue and Park Center Drive. Natural channel design techniques will be applied to approximately 950 linear feet of stream to restore Lucky Run to a stable condition and improve stream function, water quality, and habitat.



For more information, contact the City of Alexandria Department of Transportation & Environmental Services Stormwater Management Division at 703.746.6499 or visit alexandria.gov/stormwater.